REMARKS

Claims 1-50 remain in the application for consideration. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application.

§§ 102 and 103 Rejections

Claims 1-2, 4-5, 12-15, 18, 21-23, 25, 29-30, 33, 37-41 and 43 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,929,849 to Kikinis (hereafter "Kikinis").

Claims 3, 6-11, 19-20, 24, 26-28, 31-32, 34-36, 42 and 44-50 stand rejected under U.S.C. §103(a) as being unpatentable over Kikinis in view of WIPO Patent No. WO96/10888 to Adams et al. (hereinafter "Adams").

Before undertaking a discussion regarding the substance of the Office's rejections, the following discussion of Kikinis and Adams is included in order to assist the Office in appreciating the patentable distinctions between these references and the claimed subject matter in this application.

The Kikinis Reference

Kikinis is directed to methods and systems for receiving a data stream having successive image frame data in frame regions and internet URL data and association data in data regions between frame regions. Kikinis then displays, on a display monitor, successive frames derived from the image frame data. Because the association data associates image entities in successive frames with one or more URLs, a viewer may select an associated image entity in the display, causing the system to access the internet, connect with the URL, download a web page,

and display the web page in the display. The viewer may further interact with this display and entities may be enhanced in this display to indicate association with a hidden URL.

Kikinis discloses a receiving and display apparatus that allows a viewer watching a video or TV display to view and interact with a downloaded webpage. This includes using a webpage (downloaded as a result of activating a URL) as a portal to download additional information. Specifically, individual images or entities in TV presentations (like persons or emblems) are linked with dynamic URLs so that a viewer can may select such images and invoke the associated URL. See, e.g., Column 5, lines 17-26. As set out in more detail in column 8, at lines 5-38, the webpage and other additional information that has been downloaded is displayed in a ***superimposed*** window ***over*** the TV/video display, and can be enlarged or downsized, moved on the screen, and closed. (see Fig. 2C which shows a webpage and other entities ***superimposed*** on a video/TV display, thus ***occluding*** the video/TV display directly behind it). Data defining an entity's (such as a person or emblem) position is identified for a broadcast frame relative to frame geometry, and this information is recorded in a data region separate from the image data for display frame in the data stream for a broadcast. See Column 10, lines 30-38.

Thus, Kikinis discloses a system and method for transmitting, receiving, and displaying ***superimposed objects*** (potentially associated with dynamic URLs) and webpages ***over*** a TV/video display, allowing a viewer to activate a dynamic URL and use a webpage as an information portal.

The Adams reference

Adams is directed to a methods and system for an interactive video system that processes a video stream and associated data stream corresponding to the video data stream. A video is displayed on a display device and interactive command functions are performed which are specified by the associated data stream. These interactive command functions can include commands that specify placement of a video display window, commands that specify parameters of graphical objects that are associated with the video image and commands that specify pixel data or graphics description for the graphical object and commands for placement of selection windows and that specify interactive functions for the selection windows.

Adams describes its particular approach starting at around page 19, line 10+. Specifically, video packets, audio packets, and associated packets can be associated with a packetized digital data stream. Each packet can comprise a packet-header and packet payload, with the packet-header of each containing a time stamp that can synchronize these distinct packets. The payload for each may include video data for video packets, audio data for audio packets, and interactive video command and control functions for a computer system receiving the data stream.

Client runtime managers may distribute video and audio data from an incoming packetized digital data stream to the appropriate driver routines to display the video and audio on the receiving system. The incoming associated data packets are synchronized to the video and audio packets via the time stamp in the packet's packet-header portions. The associated data packets include commands for: placement of graphic objects on the display device, placement of

graphical windows on the display device, selection regions on the display surface and commands for execution upon selection of one of these regions by a mouse pointing device, commands for presentation placement and sizing of the video window on the display surface. Thus, the runtime manager on the displaying system can define the video display window according to the specifications provided by the associated data packets.

Thus, Adams discusses a means in which video, audio, and additional command functions can be sent (by a packetized digital data stream), received, and displayed in a synchronized fashion. These command functions determine how the video/audio stream and any associated objects are ultimately displayed. For example, command functions may specify characteristics such as: video screen positioning, the corresponding background color of the screen, the order in which items or text is layered on the screen, and the color palette to be used by the display driver on the system displaying the data.

Applicant's Disclosure

Aspects of Applicant's disclosure are directed to methods and systems in which data ancillary to a transmitted video stream can be prepared and sent as HTML files. In at least some embodiments, these HTML files are prepared as ***overlays*** (see Fig. 3) having backgrounds of a pre-determined color for viewing with video equipment having ***color keying features***. At a receiver, these HTML overlays are rendered using browser technology. HTML overlays are rendered in the same display area as broadcast video ***using color keying***. ***This color keying makes the overlay background, in specified areas, appear transparent: the video***

appears only in the background areas of the HTML overlays that are color keyed to be transparent.

Specifically, a transmitted video and audio stream may have ancillary supplemental digital data files accompanying them. The supplemental data may comprise one or more ***hyperlink overlays***, containing one or more hyperlinks that can be selected and activated by a viewer. These hyperlink overlays are similar to webpages – and thus broadcasters of the video/audio stream can use existing internet content development tools for designing this ancillary digital data content. However, each hyperlink overlay has a background that is set to a predetermined key color. Areas of the hyperlink ***overlays set to this key color are intended to be rendered transparent***. The receiving system can be a personal computer with display hardware for receiving and displaying broadcast video streams. Among other components (specified in the application), in at least some embodiments, the receiving system has ***color keying capability that can be configured to display video only in display areas that are set to a key color***.

In one embodiment, non transparent areas of a hyperlink overlay can appear "through" a video stream and appear to overlay the video stream. A viewer can interact with programs through the display by, perhaps, activating hyperlinks associated with certain icons. Alternatively, rather than associating displayed icons with hyperlinks, a totally transparent imagemask can be created to overlay on top of the video. This results in "hot spots" on the screen that can be clicked on for an action to occur. The ***color keying*** feature can also aid in integrating video with static bit-mapped graphics by displaying video in regions of a bit-mapped image color keyed to appear transparent.

In accordance with at least some embodiments, hyperlink overlays can be provided in groups corresponding to a particular video stream, allowing navigation among various individual overlays of the group. Alternatively, in at least some embodiments, timing and other information can be provided to the PC along with communication packets in which the overlays are transmitted. Thus, overlays can be displayed at certain times relative to the video stream itself, or relative to close-captioned text. Further, in at least some embodiments, since a stack-based algorithm is used to handle multiple overlays, one overlay can be temporarily overwritten by another (such as an emergency news transmission briefly overwriting a scheduled show). In addition, multimedia objects that are not hyperlink overlays can be launched, either by the viewer or on its own in an independent window and even viewed alongside the video.

Using color as a key, in at least some embodiments, these hyperlink overlays can be overlapped and integrated with video in a way that ***avoids merely superimposing displays on top of one another in an occlusive fashion.*** Instead, at a receiver, the hyperlink overlays are rendered in the ***same display area*** as broadcast video, ***using color keying***. This makes the overlay appear transparent: the video appears only in the background areas of the hyperlink overlays.

Claims Rejected over Kikinis under §§ 102 and 103

Claim 1 recites a method comprising the following steps:

- transmitting a video stream; and
- formatting supplemental data files in a graphical markup language, each supplemental data file having instructions for rendering a ***hyperlink overlay*** on the video stream; and
- transmitting the supplemental data files along with the video stream.

In making the rejection, the Office argues that Kikinis anticipates the subject matter in the claim. **Applicant maintains Kikinis does not disclose or suggest the subject matter of this claim.** Specifically, in regards to the second element of applicant's claim 1, the Office argues that Kikinis discloses "formatting supplemental data files in a graphical markup language, each supplemental data file having instructions for rendering a hyperlink overlay on the video stream." The Office first argues that formatting supplemental data files in a graphical markup language is disclosed by Kikinis because it discusses adding information between image frames to relate one or more image frames to a Dynamic URL, citing to column 8, lines 5-18 and column 10, lines 18-25 for support. The Office asserts that "dynamic URL" is notoriously well known in the computer art to be a file with CGI extension or script with coded syntax such as HTML. The Office further argues that **each supplemental data file having instruction for rendering over on the video stream** reads on the dynamic URL by a browser to render over the video as shown in Kikinis's Fig. 2C. Applicant respectfully requests, pursuant to MPEP 2144.03, that the Office provide reference to support its assertion that this subject matter was notoriously well known at the time of the application.

Nonetheless, Applicant respectfully disagrees and traverses the Office's rejection. Applicant respectfully submits that the Office has mischaracterized this element of Applicant's claim. Specifically, when characterizing the second portion of this claim element, the Office substitutes actual claim 1 language **"...for rendering a hyperlink overlay on the video stream;"** with different language reading "...**for rendering over on the video stream".**

As noted above, Kikinis discloses the rendering of a Dynamic URL, specifically as a downloaded webpage in a ***superimposed window***. See, e.g. Kikinis, column 8 lines 13-15. This superimposed window does not ***render a hyperlink overlay*** on the video stream, as that term is utilized in the claim and defined in the Specification. Rather, Kininis's superimposed window (or items such as an emblem) is superimposed on top of the underlying video display, as illustrated in Kikinis's Fig. 2C. Therefore, Kikinis does not anticipate this claim and, in point of fact, teaches directly away therefrom. Accordingly, this claim is allowable.

Claims 2-15 depend from claim 1 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 1, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. In addition, given the allowability of claim 1, the rejection of claims 3 and 6-11 over the combination with Adams is not seen to add anything of significance.

Claim 16 recites a method comprising the following steps:

- transmitting a video stream; and
- formatting HTML files having instructions for rendering hyperlink pages on a video stream, the *hyperlink pages having transparent areas that are set to a key color*; **and**
- associating the HTML files with the video stream; and
- ***displaying the hyperlink pages on a display***; and
- displaying the video stream on the display in areas of ***displayed hyperlink pages that are set to a key color.***

In making out the rejection of this claim, the Office argues that the combination of Kikinis and Adams disclose the subject matter of this claim. Specifically, the Office argues that the Office's analysis in respect to claims 1-3 and 5 suffices to support the rejection. Applicant respectfully disagrees and traverses the Office's rejection.

Neither Kikinis nor Adams disclose or suggest a means of formatting HTML files having instructions for rendering hyperlink pages ***on a video stream***, where the hyperlink pages have ***transparent areas*** that are set to a ***key color*** that serves as an area in which a video stream is displayed. The only mention of color by Adams is in reference to command functions which determine how the video/audio stream and any associated objects are ultimately displayed. For example, command functions may specify characteristics such as: video screen positioning, the corresponding background color of the screen, the order in which items or text is layered on the screen, and the color palette to be used by the display driver on the system displaying the data. See Adams Page 20, lines 15 – Page 21 lines 1-10. This does not disclose or suggest using a key color as recited in this claim. Accordingly, the Office has not established a *prima facie* case of obviousness and this claim is allowable.

Claims 17-23 depend from claim 16 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 16, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 24 discloses a method comprising the following steps:

- receiving a video stream; and
- associating one or more ***hyperlink pages*** with the video stream, the ***hyperlink pages having transparent areas that are set to a key color***; and
- displaying the hyperlink pages on a display; and
- ***displaying the video stream on the display in areas of displayed hyperlink pages that are set to a key color.***

In making out the rejection of this claim, the Office argues that the combination of Kikinis and Adams disclose the subject matter of this claim. Applicant respectfully disagrees and traverses the Office's rejection. As pointed out above, neither reference discloses or suggests a method in which hyperlink pages have transparent areas that are set to a key color which is then used to define areas in which a video stream is displayed. As such, the Office has not established a *prima facie* case of obviousness and this is allowable.

Claims 25-31 depend from claim 24 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 24, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 32 discloses a computer-readable storage medium having computer-executable instructions for performing steps comprising:

- receiving a video stream; and
- associating one or more hyperlink pages with the video stream, ***the hyperlink pages having transparent areas that are set to a key color***; and
- displaying the hyperlink pages on a display; and

- ***displaying the video stream on the display in areas of displayed hyperlink pages that are set to a key color.***

In making out the rejection of claim 32, the Office argues that the combination of Kikinis and Adams disclose the subject matter of this claim. Applicant respectfully disagrees and traverses the Office's rejection. As pointed out above, neither reference discloses or suggests a method in which hyperlink pages have transparent areas that are set to a key color which is then used to define areas in which a video stream is displayed. Therefore, the Office has not established a *prima facie* case of obviousness and this claim 32 is allowable.

Claims 33-39 depend from claim 32 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 32, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

Claim 40 recites a video broadcast system comprising:

- a broadcast source that broadcasts a video stream and provides accompanying supplemental data files, each supplemental data file having instructions for rendering a ***hyperlink overlay*** on the video stream; and
- a receiver configured to receive the video stream and accompanying supplemental data files and to display the ***hyperlink overlays*** in conjunction with the video stream.

In making out the rejection of claim 40, the Office argues that supplemental data files having instructions for ***rendering a hyperlink overlay on the video stream*** reads on the Dynamic URL notoriously known in the computer art with

CGI extension or Script with coded syntax in different format. The Office refers to Kikinis' column 8, lines 5-18 and column 10, lines 18-25, and argues that the Kikinis system must be formatted at the server/headend with such a file. Applicant respectfully requests, pursuant to MPEP 2144.03, that the Office provide a reference that supports this assertion.

Applicant respectfully disagrees and submits that Kikinis discusses the rendering of a Dynamic URL, specifically as a downloaded webpage in a ***superimposed window***. Kikinis' superimposed window **does not render a hyperlink overlay on** the video stream, as the term "hyperlink overlay" is used and defined in Applicant's specification.

In making out the rejection of claim 40, the Office also argues that Kikinis (as illustrated in Fig. 1, 2C, and 3A) discloses a receiver configured to receive the video stream and accompanying supplemental data file and to **display the overlays** in conjunction with the video stream.

Applicant respectfully disagrees and traverses the Office's rejection. Claim 40 recites "a receiver configured to receive the video stream and accompanying supplemental data files and to display the ***hyperlink overlays*** in conjunction with the video stream." Applicant respectfully asks the Office to indicate where in Kikinis any mention or hint is made of an "overlay" as that term is defined in Applicant's specification. Additionally, Applicant respectfully submits that the Office's use of the term "***overlay***" in regards to Kikinis is different and distinct from Applicant's use of the term "***overlay***". The receiver in Kikinis does not disclose a receiver that can display ***hyperlink overlays*** in conjunction with a video stream because ***Kikinis does not disclose hyperlink overlays*** at all. Because

Kikinis neither discloses nor suggests the subject matter of this claim, this claim is allowable.

Claims 41-44 depend from claim 40 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 40, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. In addition, given the allowability of claim 40, the rejection of claims 42 and 44 over the combination with Adams is not seen to add anything of significance.

Claim 45 recites a receiver for receiving and displaying video streams, comprising:

- display hardware for displaying video streams and bit-mapped images to a user; and
- the display hardware including ***color keying hardware that displays video in display areas that are set to a key color***; and
- access means for reading supplemental data files that have instructions for rendering ***bit-mapped hyperlink overlays in conjunction with the video stream at indicated times***; and
- a data processor that reads the supplemental data files and in response displays the ***hyperlink overlays*** at the indicated times, wherein the ***hyperlink overlays have transparent areas that are set to a key color, the hyperlink overlays thus appearing to overlay the video streams***.

In making out the rejection of claim 45, the Office argues that Kikinis discloses a step of transmitting supplemental data files (Dynamic URLs) to display ***hyperlink overlays*** as discussed in claim 1. Applicant respectfully disagrees and reminds the Office that Kikinis does not disclose a means for transmitting or displaying ***hyperlink overlays*** in conjunction with a video stream because ***Kikinis***

does not disclose hyperlink overlays at all. Hence, for at least this reason, this claim is allowable.

The Office further relies on Adams in making out the rejection of claim 45 and argues that Adams discloses display hardware as recited in this claim. Applicant respectfully disagrees and submits that Adams does not disclose display hardware that includes color keying hardware that displays video in areas that are set to a key color. In fact, Adams make no mention whatsoever of using color as a key in which to display video. As noted above, there is no reference in either Kikinis or Adams of hyperlink overlays with transparent areas and their recited use. Accordingly, for at least this additional reason, this claim is allowable.

The Office also argues that access means 54 and 60 (Fig. 2) read supplemental data (associated data files) that "have instructions for rendering bi[t]-mapped **hyperlink overlays** in conjunction with the video stream at the indicated time" and cites page 15, lines 9-16, page 19, lines 16-22, and page 23, lines 13-20. Applicant respectfully disagrees and submits that Adams makes no mention of ***hyperlink overlays*** as that term is utilized in the claim and defined in the specification.

In summary, neither reference discloses or suggests display hardware including ***color keying hardware*** that displays video ***in display areas that are set to a key color***. In addition, neither reference discloses an access means for reading supplemental data files that have instructions for rendering ***bit-mapped hyperlink overlays in conjunction with the video stream at indicated times,*** or a data processor that reads the supplemental data files and in response displays the ***hyperlink overlays*** at the indicated times. Further, neither reference discloses

hyperlink overlays having transparent areas that are set to a key color, where **the hyperlink overlays thus appear to overlay the video streams.**

Accordingly, for any one of these reasons, the Office has not established a *prima facie* case of obviousness and claim 45 is allowable.

Claims 46-50 depend from claim 45 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 45, are neither disclosed nor suggested in the references of record, either singly or in combination with one another. In addition, given the allowability of claim 45, the rejection of claims 46-50 over the combination with Adams is not seen to add anything of significance.

Conclusion

All of the claims are in condition for allowance. Accordingly, Applicant requests a Notice of Allowability be issued forthwith. If the Office's next anticipated action is to be anything other than issuance of a Notice of Allowability, Applicant respectfully requests a telephone call for the purpose of scheduling an interview.

Respectfully Submitted,

Dated: Aug. 9, 2004

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